

**Amendment to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1-8 (canceled):

Claim 9 (previously presented): A system for treating a vessel in a body, comprising:

a hollow guidewire having a central lumen;

an inflatable balloon attached near a distal end of the hollow guidewire;

an inflation hole formed in a sidewall near a proximal end of the hollow guidewire; and

a rotary valve including a rotary shaft portion rotatably disposed within the proximal end of the hollow guidewire, the shaft portion comprising a solid round wire having an eccentric channel formed along a side thereof, the channel extending across the inflation hole and being in fluid communication with the central lumen when the valve is open, wherein flow of an inflation fluid through the central lumen of the hollow guidewire and into an interior region of the inflatable balloon is controlled by rotating the rotary shaft of the rotary valve.

Claim 10 (previously presented): The system of claim 9 wherein an outer surface of the rotary shaft within the proximal end of the hollow guidewire rotatably contacts a portion of an inner surface of the hollow guidewire.

Claim 11 (currently amended): The system of claim 9 wherein the eccentric channel includes one of a flat channel, a v-shaped channel, a rectangular-shaped channel, or a circular channel.

Claim 12 (currently amended): The system of claim 9 wherein a first portion of the rotary shaft within the proximal end of the hollow guidewire has a first diameter sized for a rotating fit within an inner diameter of the hollow guidewire, and a second portion of the rotary

shaft adjacent to [[a]] the proximal end of the hollow guidewire has a second diameter substantially equal to an outer diameter of the hollow guidewire.

Claim 13 (canceled):

Claim 14 (original): The system of claim 9 further comprising:

a containment groove circumferentially disposed about the rotary shaft, the containment groove mated to a protrusion extending inwardly from an inner diameter of the hollow guidewire to prevent axial movement of the rotary shaft within the hollow guidewire.

Claim 15 (original): The system of claim 9 further comprising:

a polymeric plug formed around a portion of the rotary shaft within the hollow guidewire, the polymeric plug providing a fluid seal near the proximal end of the hollow guidewire.

Claim 16 (original): The system of claim 15 further comprising:

a channel formed in a portion of the polymeric plug to allow fluid flow into the central lumen of the hollow guidewire when the rotary valve is open.

Claim 17 (original): The system of claim 9 further comprising:

a detachable valve actuator operably attached to the hollow guidewire and the rotary shaft, wherein the rotary valve is rotated into one of an open position or a closed position when the valve actuator is actuated.

Claim 18 (original): The system of claim 17 further comprising:

an inflation fluid port operably coupled to the detachable valve actuator, wherein fluid from an inflation fluid supply connected to the inflation fluid port flows through the central lumen of the hollow guidewire when the rotary valve is open.

Claims 19-24 (canceled):